

ABSTRACT

The invention relates to a system for processing an electromagnetic input signal in which processing circuitry may be used to produce a bounded phase signal, such as by calculating an n-bit 2's compliment number in the range of $[-1, 1]$ from phase sample information for an input wave; and producing an unwrapped phase difference signal from the bound phase signal, such as by taking a 2's compliment subtraction using another wrapped phase signal from previous phase sample information. A corrected phase signal may also be used by taking a 2's complement addition using the bounded phase signal, wherein the unwrapped phase difference signal is produced using the corrected phase signal.